

Claims

1. A biocompatible gripping device for surgical use, the device comprising gripping means having at least one deformable gripping element, the element comprising a shape memory material wherein the shape memory material comprises functional porosity.
2. A biocompatible gripping device according to claim 1 wherein the deformable gripping element is deformable on gripping an article and can be returned to a non-deformed condition after releasing the article.
3. A biocompatible gripping device according to claim 2 wherein the deformable gripping element can be returned to its non-deformed condition on heating.
4. A biocompatible gripping device according to claim 3 wherein the deformable gripping element can return to the non-deformed condition on heating to a temperature of between 50°C and 100°C.
5. A biocompatible gripping device according to claim 1 wherein the shape memory material comprises a shape memory alloy.
6. A biocompatible gripping device according to claim 5 wherein the shape memory alloy is a nominally equitomic alloy.
7. A shape memory alloy according to claim 6 wherein the shape memory alloy is a titanium-nickel alloy.
8. A shape memory alloy according to claim 7 wherein the shape memory alloy is a titanium nickel alloy having substantially 52 atomic % titanium and substantially 48 atomic % nickel.
9. A biocompatible gripping device according to claim 1 wherein the

deformable gripping element is selected from a coating and an insert.

10. A biocompatible gripping device according to claim 8 wherein the deformable gripping element is applied to the gripping means by brazing, soldering, riveting, sintering or compression fit.

11. A biocompatible gripping device according to claim 1 wherein the device comprises a pair of co-operating gripping members, each of which includes a gripping surface whereby at least one of said surfaces is provided by said deformable gripping element.

12. A biocompatible gripping device according to claim 11 wherein each of said gripping surfaces is provided by a respective one of said deformable gripping elements.

13. A biocompatible gripping device according to claim 11 in the form of a surgical needle holder.

14. A biocompatible gripping device according to claim 11 in the form of forceps.

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